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# NATIONAL COMMUNICATIONS FROM PARTIES NOT INCLUDED IN ANNEX I TO THE CONVENTION

## PROVISION OF FINANCIAL AND TECHNICAL SUPPORT

## List of projects submitted by Parties not included in Annex I to the Convention in accordance with Article 12.4 of the Convention

**Note by the secretariat**

**Addendum**

## I. MANDATE

1. The Conference of the Parties (COP), by its decision 12/CP.4, requested the secretariat to compile and make available to Parties a list of projects submitted by non-Annex I Parties in accordance with Article 12.4 of the Convention.

## II. APPROACH

2. In response to the above mandate, the secretariat compiled a first list of projects submitted by non-Annex I Parties (see FCCC/SBI/1999/INF.4). The secretariat has subsequently reviewed the relevant sections of three initial national communications provided by Egypt, Georgia and Mauritius, which were submitted after the preparation of document FCCC/SBI/1999/INF.4, in order to compile this second list of projects submitted by Parties.

3. Pursuant to decision 10/CP.2 and Article 12.4 of the Convention, developing country Parties may, on a voluntary basis, propose projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reduction of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits. Of the three initial national communications reviewed, the communications from Egypt and Georgia did have separate sections where specific projects proposed for funding in accordance with Article 12.4 were elaborated on.

4. Egypt submitted a list of five projects. Two of the projects have been submitted to the Canadian Egyptian Environmental Cooperation Program for assistance, while one is in the pipeline and, together with a concept paper, has been submitted to the Global Environment Facility. The list of projects is given in the annex to this document.

5. Georgia proposed 17 project activities for funding under the heading of mitigation of greenhouse gas emission sources. For almost all of the proposed projects, indications of $CO_2$ emission reductions and cost of implementation were provided. The full list of projects is given in the annex to this document.

6. Mauritius provided, in its initial national communication, information on various mitigation options it intends to undertake to implement the Convention. Three of these options which seek to decrease dependency on fossil fuel usage are listed in the annex to this document.

Annex

## LIST OF PROJECTS SUBMITTED BY NON-ANNEX I PARTIES IN ACCORDANCE WITH ARTICLE 12.4 OF THE CONVENTION[1]

## EGYPT

1. Integrated Solar Thermal/Natural Gas Power Plant at Kuraymat

The solar thermal power project is included in the Fourth National Five Year Plan (1997-2000), and it is tentatively agreed that this project should be undertaken with private sector participation. The New and Renewable Energy Agency (NREA) has prepared a program for implementing a serial number of solar thermal power plants. The program aims at studying and implementing the first "ISCCS" project of (100-150) MW capacity from the year 1997 with a target to start project operation by the year 2001 followed by the second project of almost similar capacity to be operative before the year 2005. It is planned that the solar contribution reaches from (15%-20%) for the first plant and rises gradually for farther plants to be constructed. Moreover, the targets, by the year 2017, are the satisfaction not only of local needs, but also the beginning exportation of solar generated electricity to Europe.

2. Integrated System for Zero or Reduction Emission Fuel Cell Bus Operation in Cairo

The project addresses energy efficiency and energy conservation issues in Egypt. Fuel cell technology converts the energy carried by hydrogen gas directly into electricity without the need for moving parts or a combustion process. By eliminating the intermediate step of combustion, fuel cells would eliminate vehicle air pollution and secure a leap in energy efficiency over the internal combustion engine. The overall objective of the project is to contribute to the long term reduction of the cost of an integrated and optimized fuel cell based system. This system is to be applied in the Cairo public ground transport sector. Expected duration of the feasibility study of the project is from October 1998 to April 1999.

3. Climate Change Early Action Technology Measures: Retrofitting Two Stroke Engines

This project has been submitted by Egyptian Environment Affairs Agency (EEAA) to the Canadian Egyptian Environmental Cooperation Program. The objective of this project is to reduce emissions from motorcycles equipped with two stroke engines through a phased program of retrofitting. The proposed program includes a number of phases starting with Greater Cairo, and the retrofitting of about 150,000 motorcycles. The retrofitting technique shall be determined based on technical, economical and environmental feasibility analysis. The project would include two phases: technical, economical and feasibility investigation, and the implementation of a feasible approach for retrofitting.

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[1] Text is reproduced as submitted by Parties, with minor editing

Climate Change Early Action Technology Measures: Methane Recovery from Landfill

This project has also been submitted by Egyptian Environment Affairs Agency to the Canadian Egyptian Environmental Cooperation Program. The goal of this project is to recover methane generated from sanitary landfills as a mitigation option for reducing GHG emissions in Egypt. The recovered methane could be used as: fuel for internal combustion engines, alternative vehicular fuel, or fuel for leachate treatment systems. The project activities would include two phases: project feasibility study phase, and an implementation phase that would include site preparation, construction, operation, monitoring and evaluation.

4. Reduction of Methane Emissions to the Atmosphere through Commercial Utilization of Landfill Methane in Egypt

This project is in the pipeline and a concept paper has recently been submitted by EEAA to the Global Environment Facility. The project is being developed to promote the energy and economic benefits of commercial landfill methane recovery commensurate with solid waste management in Egypt. The major objective of this project is to develop an initial successful demonstration of commercial landfill methane recovery from an existing disposal site in the greater Cairo area. Site engineering and gas extraction would permit exploitation of the landfill gas to replace fossil fuel in an existing industrial boiler. This project, in itself, will provide tangible benefits to the greater Cairo area and, moreover, will provide a model for future projects. Importantly, this project would also provide in-country technical training and outreach activities centring on landfill methane recovery from controlled waste management as part of a national strategy to deal with increasing quantities of solid waste. Landfill methane recovery projects for direct boiler use can be economically implemented using readily available technology at relatively modest cost. As a result of this initial project, it is anticipated that the planning, engineering, and construction of commercial landfill methane recover facilities can function efficiently.

## GEORGIA

1. STORI hydropower plant

Decrease of $CO_2$ emissions during the whole period of the hydro-power plant operation (25 years) is 730 thousand tons and the approximate cost of necessary investments is US$ 8.4 million.

2. Misaktsieli hydro-power plant rehabilitation

Decrease of $CO_2$ emissions during the whole period of hydro power plant operation (25 years) is estimated to be 506 thousand tons and the approximate cost of necessary investments is US$ 2.3 million

3. Intsoba hydro power plant rehabilitation

Decrease of $CO_2$ emissions during the whole period of hydro-power plant operation (25 years) is 160 thousand tons, and the approximate amount of investments is US$ 850 thousand.

4. Abasha hydro power plant rehabilitation

Decrease of $CO_2$ emissions during the whole period of hydro-power plant operation (25 years) is 247 thousand tons, required approximate amount of investments is US$ 1 million.

5. Martkopi hydro power plant rehabilitation

Decrease of $CO_2$ emissions during the whole period of the plant operation (25 years) is 140 thousand tons, needed investments are approximately US$ 750 thousand.

6. Tbilisi geothermal hot water supply

Decrease of $CO_2$ emissions during the whole period of the project functioning (25 years) is estimated at 4.5 million tons, approximate amount of investments is US$ 30.8 million.

7. Zugdidi geothermal heat supply

Decrease of $CO_2$ emissions is 2.3 million tons during the whole period of the project functioning (25 years), approximate amount of investments is US$ 15 million.

Hippodrome district geothermal hot water supply

Decrease of $CO_2$ emission is estimated by 350 thousand tons during the whole period (25 years) of the project functioning, approximate of required investments are US$ 860 thousand.

8. "Karenergo" - the wind power plant

Decrease of $CO_2$ emissions during the whole period of the project functioning (25 years) will be 825 thousand tons, approximate investment amount is US$ 5 million.

9. Batumi heat supply with solar energy

Decrease of $CO_2$ emissions during the whole period of the project functioning (30 years) is estimated at 12 million tons, and approximate investment amount is US$ 21.8 million.

10. Removing barriers to energy efficiency in municipal heat and hot water supply in Georgia

The project aims at creation of those main demonstrating or pilot projects, for which attraction of investments should be carried out in this phase of investigation. UNDP/GEF-Government of Georgia. Cost of project is US$ 211 thousand.

11. Decrease of greenhouse gas emissions by means of harmonic development of transportation types

Development of ecologically clean, passenger and freight automated special means of transportation (cable cars, cable and railway cars, monorail transportation, trolleybuses, etc).

12. Energy efficiency increase in Kaspi Cement Plant

Decrease of $CO_2$ emissions during the whole period of project operation (25 years) is estimated at 230 thousand tons, approximate amount of investments is US$ 1 million.

13. Project on Tbilisi dendrological park restoration

Sequestration of $CO_2$ during the whole period of the project functioning (50 years) is estimated at 90 thousand tons, approximate amount of required investments is US$ 230 thousand.

14. Project on reforestation of Kaspi district

Sequestration of $CO_2$ for the whole period of project functioning (50 years) is estimated at 98 thousand tons, approximate amount of the investment required is US$ 350 thousand.

15. Afforestation of the "Red Bridge" environs

Sequestration of $CO_2$ for the whole period of the project (50 years) is estimated at 75 thousand tons, approximate amount of required investments is US$ 250 thousand.

16. "Nabadkhevi" forest rehabilitation

Sequestration of $CO_2$ for the whole period of the project functioning (50 years) is estimated at 85 thousand tons, amount of investment funds is approximately US$ 270 thousand.

## MAURITIUS

1. Increasing Use of Renewable Energy Alternatives

Mauritius has significant potential to utilize many alternatives for generation of electricity while decreasing dependency on fossil fuels usage; and with capital investment could provide almost all of the islands' energy needs from a combination of biofuels (from sugar cane), photovoltaics (solar), wind power, ocean wave power, and ocean thermal energy conversion. Most of these would require tremendous initial capital investment, with benefits accruing in the long-term, both environmentally and economically. Decisions must be made at a high-level about what technologies to pursue.

2. Building a rapid public transport system, including the use of electric-powered vehicles

Funding will be crucial to do engineering, obtain equipment, and to purchase rights of way and land for construction.

3. Fuel Switching

The most promising option is possible local production of ethanol from sugar cane by-products; LPG technology is in its infancy but is a long-term future possibility. Private electric cars at this point are not a realistic option.

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